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Cell Death Differ. 2001 Jun;8(6):649-57.

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A prosurvival function for the p75 receptor death domain mediated via the caspase recruitment domain receptor-interacting protein 2.

J Neurosci. 2001 Aug 15;21(16):5854-63.

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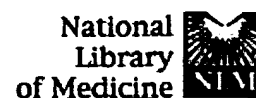
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J Biol Chem. 2004 Nov 5;279(45):46415-23. Epub 2004 Aug 26.  
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NF-kappaB activation by the chemopreventive dithiolethione oltipraz is exerted through stimulation of MEKK3 signaling.  
J Biol Chem. 2004 Jun 18;279(25):26019-27. Epub 2004 Mar 26.  
PMID: 15047705 [PubMed - indexed for MEDLINE]

5: [Luftig M, Prinarakis E, Yasui T, Tschirritzis T, Cahir-McFarland E, Inoue J, Nakano H, Mak TW, Yeh WC, Li X, Akira S, Suzuki N, Suzuki S, Mosialos G, Kieff E.](#) Related Articles,

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Oncogene. 2003 Jun 19;22(25):3842-52.  
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- ▢ 9: Meylan E, Martinon F, Thome M, Gschwendt M, Tschopp J. Related Articles,



RIP4 (DIK/PKK), a novel member of the RIP kinase family, activates NF-kappa B and is processed during apoptosis.  
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The epidermal growth factor receptor engages receptor interacting protein and nuclear factor-kappa B (NF-kappa B)-inducing kinase to activate NF-kappa B. Identification of a novel receptor-tyrosine kinase signalosome.  
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- ▢ 16: Kasof GM, Prosser JC, Liu D, Lorenzi MV, Gomes BC. Related Articles,


The RIP-like kinase, RIP3, induces apoptosis and NF-kappaB nuclear

 translocation and localizes to mitochondria.  
FEBS Lett. 2000 May 19;473(3):285-91.  
PMID: 10818227 [PubMed - indexed for MEDLINE]


 17: [Martinon F, Holler N, Richard C, Tschopp J.](#) Related Articles,


 Activation of a pro-apoptotic amplification loop through inhibition of NF-kappaB-dependent survival signals by caspase-mediated inactivation of RIP  
FEBS Lett. 2000 Feb 25;468(2-3):134-6.  
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 Mouse receptor interacting protein 3 does not contain a caspase-recruiting (death domain but induces apoptosis and activates NF-kappaB.  
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 The interaction of p62 with RIP links the atypical PKCs to NF-kappaB activation.  
EMBO J. 1999 Jun 1;18(11):3044-53.  
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22: Thome M, Hofmann K, Burns K, Martinon F, Bodmer JL, Mattmann C, Tschopp J. Related Articles,

Identification of CARDIAK, a RIP-like kinase that associates with caspase Curr Biol. 1998 Jul 16;8(15):885-8. PMID: 9705938 [PubMed - indexed for MEDLINE]

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Signaling molecules that mediate the actions of FGF. Princess Takamatsu Symp. 1994;24:243-9. Review. PMID: 8983079 [PubMed - indexed for MEDLINE]

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TI Caspase-8 and caspase-10 activate NF-kappaB through RIP, NIK and IKKalpha kinases.  
AU Shikama Yoshiaki; Yamada Masao; Miyashita Toshiyuki  
CS Department of Genetics, National Research Institute for Child Health and Development, 3-35-31 Taishido, Setagaya-ku, Tokyo 154-8567, Japan.  
SO European journal of immunology, (2003 Jul) 33 (7) 1998-2006.  
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AB NF-kappaB regulates the expression of various genes involved in cell growth and differentiation, immune response and inhibition of apoptosis. Recently, some death effector domain (DED)-containing proteins, such as FADD and c-FLIP were reported to activate NF-kappaB. We previously reported that the prodomain-only isoforms of caspase-8 and -10 (PDCasp8/10), containing two DED motifs, could inhibit Fas-mediated apoptosis. Here, we demonstrate that these isoforms also activate NF-kappaB, implying this to be one of the mechanisms by which these polypeptides inhibit apoptosis. The GST pull-down assay revealed that, among upstream kinases that activate NF-kappaB, only NIK and RIP, but not RICK or IKKalpha/beta, could directly bind to PDCasp8/10. In addition, both modules ofDED in PDCasp8/10 were required for these interactions as

well as NF-kappaB activation. Experiments using a kinase-dead mutant of IKKalpha and an RIP mutant lacking a **kinase** domain, both of which function as **dominant-negative** mutants for their wild-type counterparts, blocked PDCasp8/10-mediated NF-kappaB activation. Using small interfering RNA technology, we further demonstrate that the down-regulation of IKKalpha but not IKKbeta significantly inhibits PDCasp8-mediated NF-kappaB activation. Taken together, these results suggest that caspase-8 and -10 have roles in a non- or anti-apoptotic signaling pathway leading to NF-kappaB activation through RIP, NIK and IKKalpha.

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 TI Dominant-negative variants of human protein kinases that inhibit the phosphorylation activity of their active enzyme isoforms  
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AB The present invention concerns 91 nucleic acid sequences and amino acid sequences of variants of various human kinases, i.e. of sequences which inhibit activity of kinases in a dominant manner. The variants lack a domain or region required for phosphorylation, and thus may be dominant-neg. kinases obtained by alternative splicing of known original sequences of the kinase genes. The novel dominant-neg. kinase variants of the invention are not merely artificially truncated forms, fragments or mutations of known genes, but rather novel sequences which naturally occur within the body of individuals. The invention also concerns pharmaceutical compns. and detection methods using these sequences.

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